

## **Cluster of late preterm and term neonates with necrotizing enterocolitis symptomatology: descriptive and case-control study.**

[Sdona E<sup>1</sup>](#), [Papamichail D<sup>2</sup>](#), [Panagiotopoulos T<sup>2</sup>](#), [Lagiou P<sup>3</sup>](#), [Malamitsi-Puchner A<sup>1</sup>](#).

### **Author information**

#### **Abstract**

##### **OBJECTIVE:**

To investigate a necrotizing enterocolitis (NEC) cluster of late preterm and term neonates (gestational age  $\geq 34$  weeks).

##### **METHODS:**

We conducted a descriptive and a case-control study. Medical records of neonates with modified Bell stage  $\geq$  IB NEC and matched controls were reviewed, in addition to microbiological and environmental investigation. Study variables included maternal/delivery and neonatal factors, medications, procedures and feeding practices. Univariable/multivariable logistic regression analyses were performed for all and for stage  $\geq$  II cases.

##### **RESULTS:**

Out of 1841 late preterm and term neonates, 10 stage IB and 10 stage  $\geq$  II [mean(SD) birthweight 2529.3 (493.04) g, gestational age 36.96 (1.48) weeks] presented with NEC symptomatology at mean 4.6 (range 2-8) days. Nearly all (19/20) resulted from high-risk pregnancies and received postpartum intermediate care. All were exclusively or partly formula fed. Most (14/20) were born by cesarean delivery. Eight underwent surgery, with no fatality. Intermediate care ( $p = 0.006$ ), transient tachypnea ( $p = 0.049$ ), not receiving breast milk ( $p = 0.019$ ) and in addition intrauterine growth restriction (IUGR) ( $p = 0.017$ ) for stage  $\geq$  II cases were independently associated with NEC.

##### **CONCLUSIONS:**

Late preterm and term neonates in need of intermediate care, with IUGR and transient tachypnea were susceptible to NEC; feeding with breast milk was an important protective factor.

##### **KEYWORDS:**

Breast milk; NEC; late preterm; risk factors; term infant